

Amendments to the Claims:

What is claimed is:

1. (currently amended) A method for increasing efficiency of heat transfer of a furnace in which calcium-containing coal is burned, comprising:

(a) adding to the coal enough of a fluxing agent-free composition comprising an iron compound to produce treated coal that is free of added fluxing agent and contains an effective amount of the iron compound; and

(b) burning the treated coal that is free of added fluxing agent, forming calcium ferrite,

thereby increasing the efficiency of the heat transfer of the furnace.

2. (original) A method as set forth in claim 1 wherein the iron compound is iron oxide.

3. (original) A method as set forth in claim 2 wherein the iron oxide is ferric oxide.

4. (original) A method as set forth in claim 1 wherein calcium oxide is produced when the treated coal is burned and the iron compound reacts with the calcium oxide to form the calcium ferrite.

5. (original) A method as set forth in claim 4 wherein the iron compound is iron oxide.

6. (original) A method as set forth in claim 5 wherein the iron oxide is ferric oxide.

7. (original) A method as set forth in claim 1, comprising the steps of:

(a) adding an effective amount of an iron compound to the coal to produce treated coal free of added fluxing agent;

(b) grinding the treated coal to produce ground, treated coal free of added fluxing agent;

(c) introducing the ground, treated coal free of added fluxing agent into a furnace; and

(d) burning the ground, treated coal free of added fluxing agent in the furnace, producing calcium ferrite.

8. (original) A method as set forth in claim 3 wherein the ferric oxide is added in an amount of from about 0.25% to about 0.75% based on the weight of the coal.

9. (currently amended) A method as set forth in claim 1 wherein the method consists essentially of:

(a) adding to the coal enough of a fluxing agent-free composition comprising an iron compound to produce treated coal that is free of added fluxing agent and contains an effective amount of the iron compound; and

(b) burning the treated coal that is free of added fluxing agent.

10. (original) A method as set forth in claim 9 wherein the fluxing agent-free composition consists essentially of ferric oxide.

11. (canceled) A method for increasing the melting point of ash produced during the burning of calcium-containing coal, comprising:

(a) adding an effective amount of an iron compound to the coal to produce treated coal; and

(b) burning the treated coal, producing ash of increased melting point.

12. (canceled) A method as set forth in claim 11 wherein the iron compound is iron oxide.

13. (canceled) A method as set forth in claim 12 wherein the iron oxide is ferric oxide.

14. (canceled) A method as set forth in claim 13, comprising the steps of:

(a) adding an effective amount of an iron compound to the coal to produce treated coal;

(b) grinding the treated coal to produce ground, treated coal;

(c) introducing the ground, treated coal into a furnace; and

(d) burning the ground, treated coal in the furnace, producing ash of increased melting point.

15. (canceled) A method as set forth in claim 14, consisting essentially of the steps of:

(a) adding to the coal enough of a composition consisting essentially of ferric oxide to produce treated coal containing an effective amount of ferric oxide;

(b) grinding the treated coal to produce ground, treated coal;

- (c) introducing the ground, treated coal into a furnace; and
- (d) burning the ground, treated coal in the furnace, producing ash of increased melting point.

16. (Previously added) The method of claim 1, further comprising reducing the furnace exit gas temperature (FEGT).

17. (New) A method as set forth in claim 1 wherein the burning of the treated coal that is free of added fluxing agent produces an ash of increased melting point and that contains the calcium ferrite.

18. (New) A method as set forth in claim 1 wherein the method is carried out without soot blowers or water lances.

19. (New) A method as set forth in claim 17 wherein the method is carried out without soot blowers or water lances.

20. (New) A method as set forth in claim 1 wherein the method is carried out without added fluxing agent.

21. (New) A method as set forth in claim 17 wherein the ash is darker than if produced without addition of the composition.